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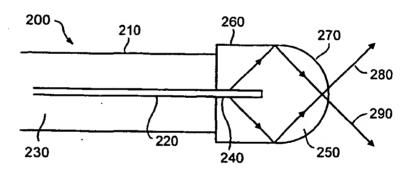
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(54) Title: RADIATION APPLICATOR

(57) Abstract

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Radiation applicators comprise an elongate device having an antenna (240, 340) at their tip for coupling radiation into biological tissue and a dielectric body (250, 350) surrounding the antenna so as to encompass substantially the whole of the near-field region of the antenna and/or to enhance transmission of radiation in the forward direction. The body (250, 350) may be cylindrical with the antenna (240, 240) attent in antenna (240, 240) attent in antenna (240, 240) attent in antenna (240, 240, 240).



(240, 340) along its axis. The antenna may be $\lambda/2$ in length and $\lambda/2$ in radius. The tip (270) of the antenna (240) may be rounded hemispherical with radius $\lambda/2$ to enhance forward transmission of radiation. The dielectric constant (ϵ) of the body (250, 350) is as high as possible to reduce its diameter at a desired operating frequency but may be matched to the surrounding tissue by another layer of dielectric material (380) with a value (ϵ) intermediate that of the core (360) of the body (350) and the tissue.